

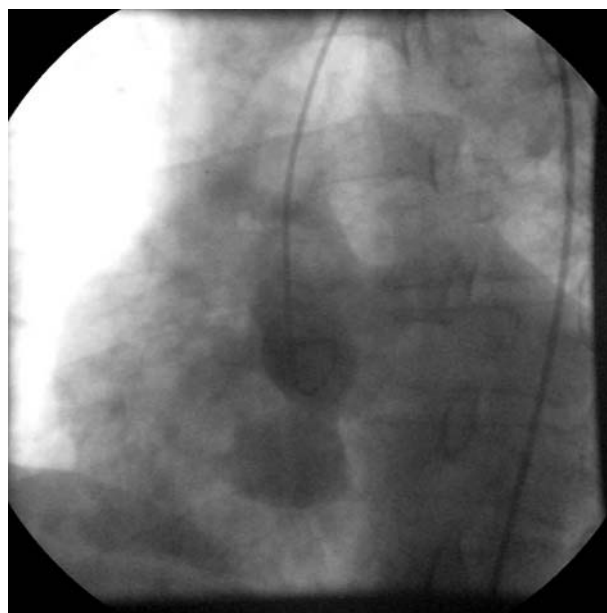
IMAGES IN CARDIOLOGY

Heart 2005;91:e44 (<http://www.heartjnl.com/cgi/content/full/91/5/e44>). doi: 10.1136/hrt.2005.060558

Ruptured sinus of Valsalva aneurysm

A 52 year old man with hypertension was admitted with a history of sudden onset palpitations, light headedness, and breathlessness. On examination he was afebrile with a blood pressure of 113/52 mm Hg and pulse rate 110 beats per minute. He had soft systolic and early diastolic murmurs with normal chest auscultation; there was no haemodynamic discrepancy between left and right sides or stigmata of endocarditis. His ECG showed sinus rhythm with T wave inversion in V₁–V₃, and chest x ray was normal. Full blood count and cardiac enzymes were normal, but biochemistry revealed raised urea and creatinine concentrations (14.0 mmol/l and 378 mmol/l, respectively). He had a transthoracic echocardiogram a day later, which showed a dilated right ventricle, normal sized left ventricle with good systolic function, and no vegetations or valvular abnormalities. An abnormal jet of colour flow from the aorta towards the right heart was seen suggesting a sinus of Valsalva aneurysm rupture into the right atrium or ventricle. Urgent cardiac catheterisation revealed raised right heart pressures and a step-up in oxygen saturations at the right atrial level. Ascending aortic pressure was 105/49 mm Hg and an aortogram confirmed a sinus of Valsalva rupture into the right atrium (see panel); the shunt ratio was calculated at 1.65:1. The patient was taken to the intensive care unit for haemofiltration before transfer for emergency repair of the ruptured sinus the same day. He made a good recovery and was reviewed in the outpatient department and is doing well.

The diagnosis of ruptured sinus of Valsalva aneurysm should be suspected in patients presenting with acute haemodynamic compromise and cardiac murmurs; such patients should have urgent echocardiography. Definitive diagnosis often requires cardiac catheterisation and unless endocarditis is suspected, an aortogram should be performed.



A right anterior oblique view of aortogram demonstrating ruptured sinus of Valsalva aneurysm into the right atrium. The moving image of this figure is available on the *Heart* website at <http://www.heartjnl.com/supplemental/>



Supplemental material is available on the *Heart* website—<http://www.heartjnl.com/supplemental/>

F Osman
S Qaisar
M Pitt

f.osman@bham.ac.uk